

**Kramer Electronics, Ltd.**



# **USER MANUAL**

**Model:**

**VA-15xl**

*6x1 Balanced Audio Mixer*

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## 1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups<sup>1</sup> that are clearly defined by function.

Thank you for purchasing your Kramer **VA-15x1**, which is ideal for:

- Live stage and studio audio mixing
- Presentation systems and press conferences
- Post production in video/audio studios

The package includes the following items:

- **VA-15x1** *6x1 Balanced Audio Mixer*
- Power adapter (12V DC)
- This user manual<sup>2</sup>

## 2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high-performance high-resolution cables<sup>3</sup>

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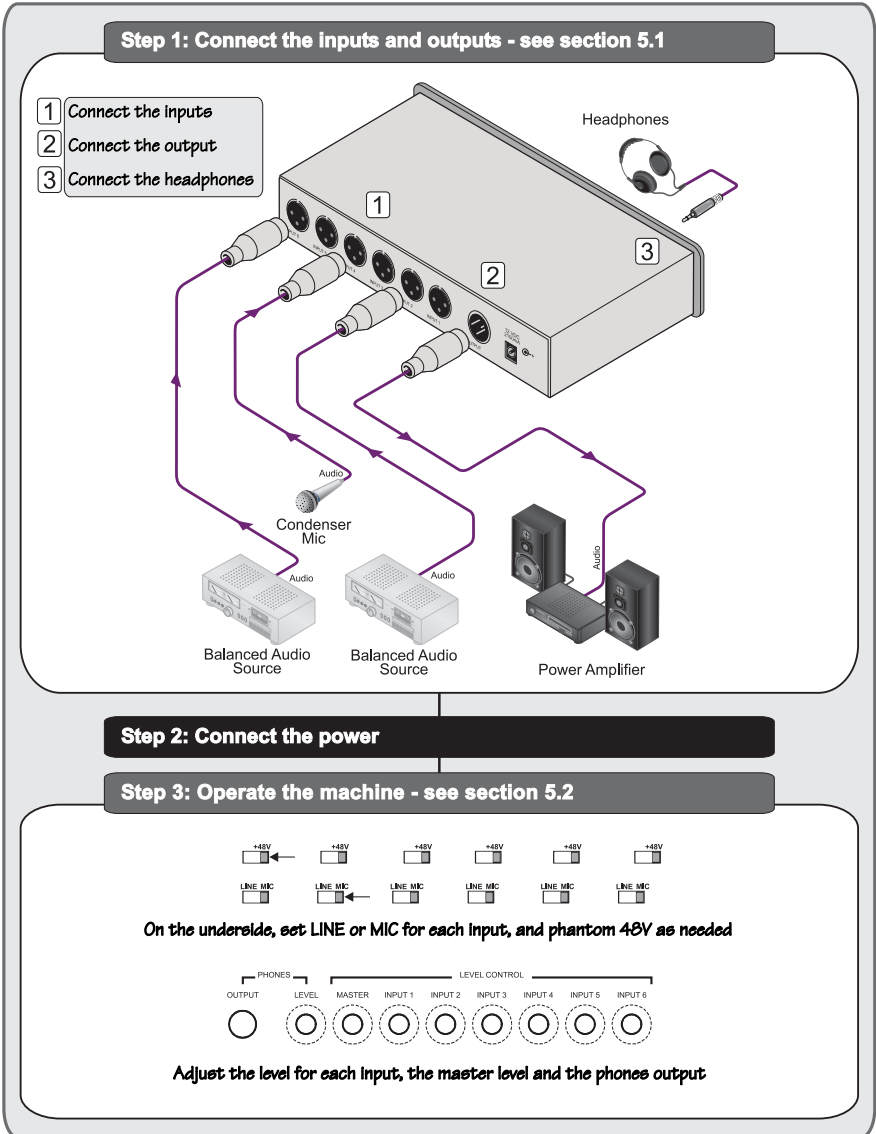
1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

2 Download up-to-date Kramer user manuals from the Internet at this URL: <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

## 2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.



### 3 Overview

The **VA-15xl** 6x1 *Balanced Audio Mixer* is a high-quality, low noise, 6 input balanced audio standalone mixer that provides for 2 different levels on each input - mic level or line level. The **VA-15xl** includes a:


- Master front panel level control knob for adjustment of all<sup>1</sup> channels
- Separate front panel headphone output, positioned alongside a level control knob for local monitoring of the mixed signal
- 12V DC rear panel power socket, which is ideal for field use<sup>2</sup>. The unit generates broadcast voltage level  $\pm 15V$  and  $\pm 48V$  internally from the single 12V DC input

In particular, the **VA-15xl** 6x1 *Balanced Audio Mixer* includes six:

- Front panel level control knobs<sup>3</sup> for adjusting each channel
- Rear panel XLR input connectors and an XLR output connector
- Underside panel switches<sup>3</sup> for selecting the balanced level (mic or line)
- Underside panel switches<sup>3</sup> for applying 48V phantom power<sup>4</sup>

To achieve the best performance:

- Use only good quality connection cables<sup>5</sup> to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer **VA-15xl** away from moisture, excessive sunlight and dust

	<b>Caution:</b> No operator serviceable parts inside unit
	<b>Warning:</b> Use only the Kramer Electronics input power wall adapter that is provided with the unit*
	<b>Warning:</b> Disconnect power and unplug unit from wall before installing or removing the device or servicing unit
<small>* For example, P/N 2535-000251 (12V DC), P/N 2535-052002 (5V DC)</small>	

1 The combined signals from inputs 1 to 6 are mixed

2 Via a belt battery

3 Each corresponds to its respective input

4 This is for applications that require typical condenser microphones to be connected directly to the VA-15xl. To prevent unnecessary damage, apply phantom power to the Mic only when required

5 Available from Kramer Electronics on our Web site at <http://www.kramerelectronics.com>

## 4 Your VA-15xl 6x1 Balanced Audio Mixer

[Figure 1](#), [Table 1](#) and [Table 2](#) define the **VA-15xl 6x1 Balanced Audio Mixer**.

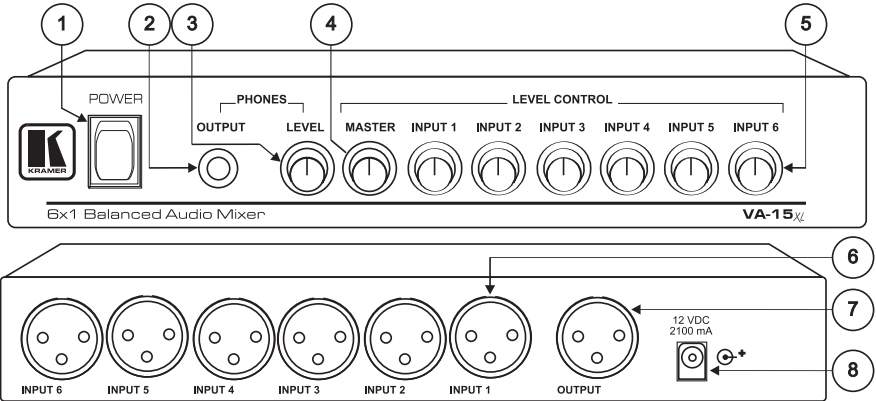


Figure 1: VA-15xl 6x1 Balanced Audio Mixer

Table 1: Front Panel Features and Functions of the VA-15xl 6x1 Balanced Audio Mixer

#	Feature	Function
1	POWER Switch	Illuminated switch supplying power to the unit
2	PHONES OUTPUT Connector	Connects to the headphone set
3	PHONES LEVEL Knob	Adjusts the headphone volume
4	MASTER LEVEL CONTROL Knob	Adjusts the combined signals from all inputs mixed to the output
5	INPUT LEVEL CONTROL Knob	Adjusts the input level (from 1 to 6)

Table 2: Rear Panel Features and Functions of the VA-15xl 6x1 Balanced Audio Mixer

#	Feature	Function
6	INPUT (1 to 6) XLR Female Connector	Connects to the audio source (from 1 to 6)
7	OUTPUT XLR Male Connector	Connects to the audio acceptor
8	12V DC 2100mA	+12V DC connector for powering the unit

[Figure 2](#) illustrates (and [Table 3](#) defines) the underside of the **VA-15xl 6x1 Balanced Audio Mixer**, indicating to which input connector each *LINE / MIC* switch and each *+48V* switch relates.

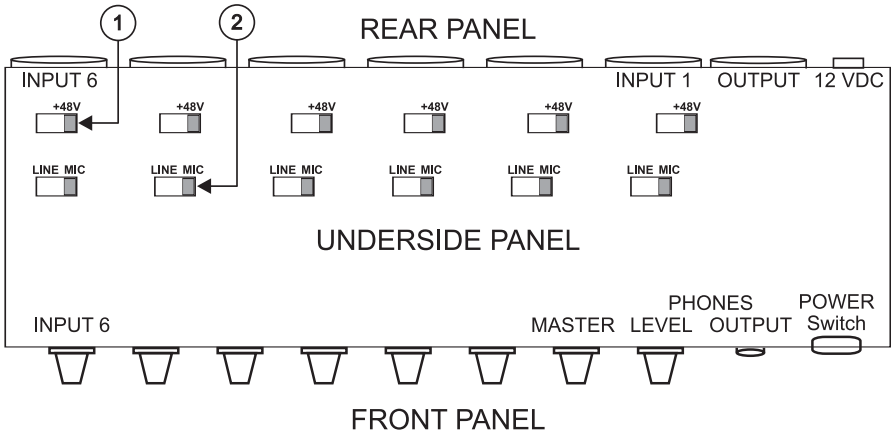


Figure 2: VA-15xl 6x1 Balanced Audio Mixer Underside Features

Table 3: VA-15xl 6x1 Balanced Audio Mixer Underside Features

#	Feature	Function
1	+48V Switch	Move to the right to apply 48V nominal phantom power
2	LINE / MIC Selector Switch	Move to the right to select MIC. Move to the left to select LINE level

## 5 Using Your Balanced Audio Mixer

Sections [5.1](#) and [5.2](#) describe how to connect and operate your balanced audio mixer, respectively.

### 5.1 Connecting Your Balanced Audio Mixer

To connect up to 6 balanced audio sources to the **VA-15xl 6x1 Balanced Audio Mixer** unit, as the example in [Figure 3](#) illustrates, do the following:

1. Connect the balanced audio source 2 to the XLR female INPUT 2 connector and select the LINE level by setting the LINE / MIC selector switch<sup>1</sup> and the +48V selector switch<sup>1</sup> to the left.
2. Connect the balanced audio source 6 to the XLR female INPUT 6 connector and select the LINE level by setting the LINE / MIC selector switch<sup>1</sup> and the +48V selector switch<sup>1</sup> to the left.
3. Connect the condenser microphone audio source 4 to the XLR female INPUT 4 connector and select the MIC level by setting the LINE / MIC

<sup>1</sup> Located on the underside of the VA-15xl

selector switch<sup>1</sup> to the right. Apply 48V phantom power by setting the +48V selector switch<sup>1</sup> to the right.

4. Connect the XLR male OUTPUT connector to a power amplifier, and connect the power amplifier to a pair of speakers.
5. Connect the PHONES OUTPUT connector to a headphone set.
6. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity.

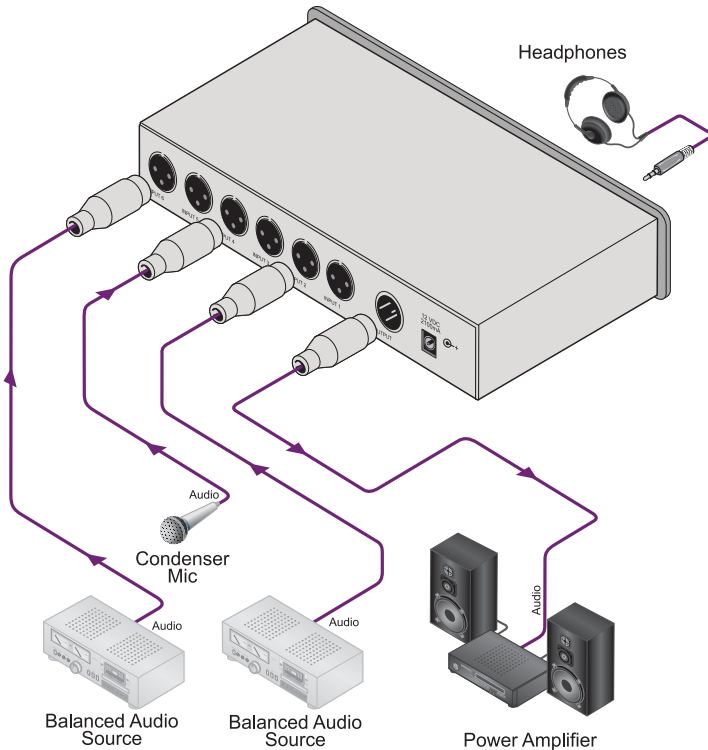


Figure 3: Connecting the VA-15xl 6x1 Balanced Audio Mixer

<sup>1</sup> Located on the underside of the VA-15xl



## 5.2 Operating Your Balanced Audio Mixer

On the **VA-15xl 6x1 Balanced Audio Mixer** unit, you can adjust the level:

- From a specific<sup>1</sup> input, by rotating the appropriate LEVEL CONTROL knob
- From all the inputs mixed together, by rotating the MASTER LEVEL CONTROL knob
- At the headphone set, by rotating the PHONES LEVEL knob

For every unused input<sup>2</sup>, be sure to rotate the LEVEL CONTROL knob fully counter-clockwise (to the minimum level).

## 6 Technical Specifications

*Table 4: Technical Specifications<sup>3</sup> of the VA-15xl 6x1 Balanced Audio Mixer*

INPUTS:	6 audio, with selectable line (10kΩ) or mic (4kΩ with phantom voltage), balanced, on XLR (F) connectors
OUTPUTS:	1 audio, 50Ω balanced on a XLR (M) connector. One headphone output, 250mW max into 8Ω
MAX. OUTPUT LEVEL:	Mix out: 26Vpp, phones out: 4Vpp
BANDWIDTH (-3dB):	20kHz
S/N RATIO:	76dB unweighted (line), 72dB (mic)
PHANTOM VOLTAGE:	+48V typical
CROSSTALK (all hostile):	-64dB @20kHz, all hostile
CONTROLS:	Line (each): -54dB to +6dB; mic (each): -54dB to +52dB; master: -79dB to +6dB (line level inputs); phones: -77dB to +11dB
COUPLING:	Inputs: AC; output: DC
AUDIO THD + NOISE:	0.021%
AUDIO 2nd HARMONIC:	0.002%
POWER SOURCE:	12V DC, 2.1A
DIMENSIONS:	24.5cm x 18cm x 4.4cm (9.6" x 7" x 1.7") W, D, H
WEIGHT:	1.4kg. (3.1lbs) approx
ACCESSORIES:	Power supply, TP to balanced audio adapter
OPTIONS:	RK-MEDN 19" rack adapter

<sup>1</sup> For example, rotating LEVEL CONTROL knob 6 will adjust the volume generated to the speakers via the power amplifier from the balanced audio source 6

<sup>2</sup> For example, in the scenario illustrated in [Figure 3](#), LEVEL CONTROL knobs 1, 2 and 5

<sup>3</sup> Specifications are subject to change without notice

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## LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

### HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

### WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

### WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site [www.kramerelectronics.com](http://www.kramerelectronics.com).
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
  - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
  - ii) Product modification, or failure to follow instructions supplied with the product
  - iii) Repair or attempted repair by anyone not authorized by Kramer
  - iv) Any shipment of the product (claims must be presented to the carrier)
  - v) Removal or installation of the product
  - vi) Any other cause, which does not relate to a product defect
  - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

### WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

### HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

### LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

### EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

**NOTE:** All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC* Rules and Regulations: Part 15: "Radio frequency devices Subpart B Unintentional radiators"

### CAUTION!

- ⊗ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ⊗ Use the supplied DC power supply to feed power to the machine.
- ⊗ Please use recommended interconnection cables to connect the machine to other components.  
\* FCC and CE approved using STP cable (for twisted pair products)



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**For the latest information on our products and a list of Kramer distributors, visit our Web site: [www.kramerelectronics.com](http://www.kramerelectronics.com), where updates to this user manual may be found. We welcome your questions, comments and feedback.**



**Caution**

**Safety Warning:**

Disconnect the unit from the power supply before opening/servicing.



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**Kramer Electronics, Ltd.**

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**P/N: 2900-006020 REV 3**